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ABSTRACT

Reported are results of a study by the New Mexico Department of Education to determine educational needs for exceptional children. The study is explained to be the first step in compliance with a 1972 mandate of the State legislature to provide educational services for all exceptional children in the State. Described is the study design which includes the process of deriving a sample population (drawn from 16 school districts according to district size, geographic location, community income level, and ethnic composition); evaluation procedures; study implementation (with cooperation of the Southwest Regional Resource Center at New Mexico State University), and data treatment. Study results are broken down into the following components: general population characteristics of the sample (718 children) giving data on sex, age, grade, language spoken, intelligence levels, and achievement; categorical incidence rates (nine categories); and education implications. It is maintained that 48,000 children need special education in addition to the 9,500 children presently served. The findings are said to indicate need for increased financing for identification and diagnosis, program development, teacher training and continuing education, media equipment, environmental adaptation, and monitoring/evaluation during the period of 1974 through 1979. Included in appendixes are the screening and evaluation procedures used in the 1973 assessment, categorical definitions and classification criteria used, and a chart on the range of service alternatives for public school education. (MC)

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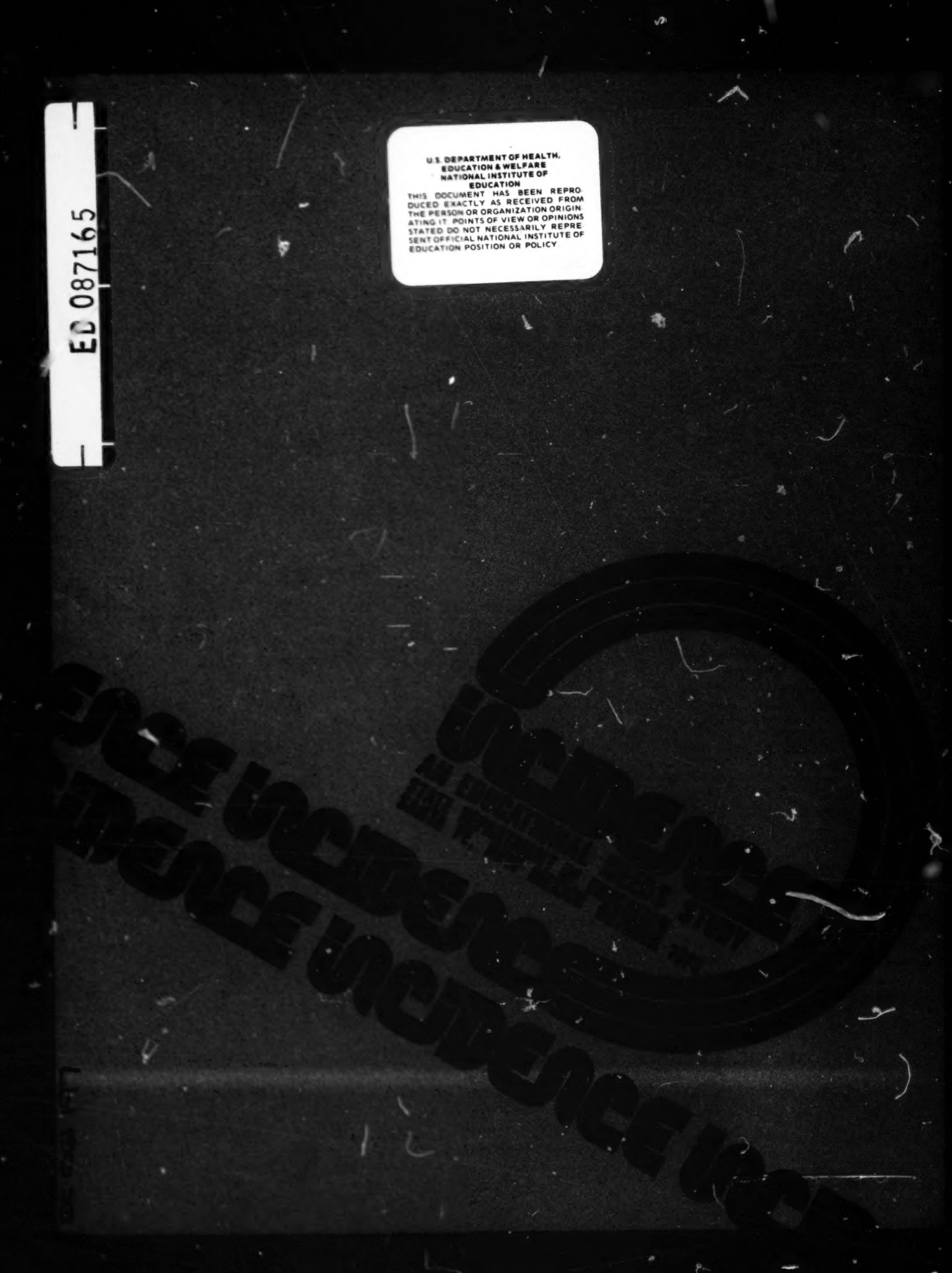

ED 087165

AN EDUCATIONAL NEEDS STUDY REPORT

RELATED TO INCIDENCE OF EXCEPTIONALITY

A PRELUDE TO PLANNING SPECIAL EDUCATIONAL SERVICES IN NEW MEXICO

The State Department of Education
Santa Fe, New Mexico

Leonard J. DeLayo
Superintendent of Public Instruction

November 1973

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INTRODUCTION

The Thirtieth New Mexico Legislature, Second Session, 1972, mandated that the state's public schools will provide educational services for all exceptional children.[1] To meet the educational needs of the state's total exceptional population in a responsive and prudent manner requires, initially, an intensive planning process and, ultimately, affirmative program action and financing.

As a first step in the planning process, the State Department of Education, Division of Special Education, participated with a broadly-based committee of parents, educators and community leaders in the definition and evaluation of the major problems involved in areas related to special education program expansion. The January 1973 publication of the findings of that group reports the single most critical problem facing special education in New Mexico today is that no one knows the number of children in the state who need special education services or what kinds of services these children need.[2] While the state has made considerable strides in recent years in the identification of its exceptional public school population, the shortage of trained diagnostic personnel, particularly critical in the rural and the more remote areas of the state, has consistently inhibited the needed progress with respect to psychological and educational diagnosis and evaluation.[3] Efforts by the Division of Special Education to obtain financing to ameliorate the situation through the use of statewide diagnostic teams have not been successful to date.[4] [5]

Great difficulty is encountered in any attempt to estimate the prevalence of conditions of exceptionality among school aged children in New Mexico from various reports of national incidence. Not all reports included the same categories nor agreed upon the definitions of those categories. Even subtle distinctions in definition have resulted in widely diverse numerical counts. The status of the current thinking in the field and the degree of refinement of the diagnostic art at the time the research was conducted have affected the figures reported. Other variables which have accounted for different results include the lack of consistency in the methods that were used to collect the data and the wide range of populations that were studied. A review of pertinent publications shows an array of national rates, e.g., 10.053 per cent,[6] 11.59 per cent,[7] 12.4 per cent, [8] and 12.7 per cent.[9]

Even if discrepancies between the estimates such as those cited above could be reconciled, the extent to which national averages are applicable to New Mexico, with its complexity of geographic, economic and cultural factors, is questionable. Other states which have compiled information on incidence have, in general, reported rates considerably in excess of the conservative national averages, e.g., 16.85 per cent,[10] 19.87 per cent,[11] 21.10 per cent,[12] and 27.29 per cent,[13] and results of a few controlled studies in New Mexico have suggested very high prevalence of certain handicaps in some portions of the state where inadequate nutrition, scarcity of medical services and overall living conditions are problematic.[14] [15]

Planning and programming for special education and accurate projections of adequate financing for specific populations mandate that valid and reliable population demography be available. Faced with the lack of specific information and the limitations of related research, the Division of Special Education concluded that an educational needs study must be conducted in New Mexico. The results of such an assessment would be used to generate data for use in forecasting and planning long range strategies to guide the rational and orderly expansion of special education programs to full capacity.

DESIGN OF THE STUDY

Sampling Process

The most obvious and best way to have obtained accurate numbers of and descriptive information about the exceptional children in New Mexico's public school population would have been to evaluate individually every child in that population. Such an undertaking was, of course, impossible, given the confines of time, money and personnel available. Various alternatives were explored, and it was decided to select a sample of children for intensive evaluation and generalize the results, an accepted practice in a wide variety of disciplines dealing with human populations. It was felt that by use of a well defined and highly controlled sampling process it would be possible to obtain a high degree of precision in estimating the characteristics of the total public school population from study of a relative few.

In light of the diverse nature of the New Mexico public school population, the primary problem confronted in the use of the sampling process was to ensure that the sample was truly representative of the total from which it was drawn and that it would adequately reflect differences within the total and, accordingly, variations in performance. The most effective way to reduce the possibility of error associated with this problem was to stratify the sample so that significant strata in the total were represented in the sample in proportion to their size and homogeneity within the whole population. After review of the information available on the characteristics of the New Mexico public school population, four relatively independent factors were isolated as those which were most critical for stratification. They were as follows: size of school district, geographic location, income level in the community(ies) served and ethnic composition of the student body.

Once the stratification parameters were fixed, the pertinent population characteristics of districts were analyzed to determine which districts would be included in the sample. All school districts were first considered within the nine existing size categories based on average daily membership (ADM). Table 1 shows these categories and the number and combined ADM of all districts by category.

Two districts in different geographic locations were selected to participate from each category. The selection was based upon how closely the average (median) income level and per cent ethnic composition, combined for the two districts, compared with the average (median) income level and per cent ethnic composition for all districts in the category. There were two exceptions to paired representative districts. Albuquerque was automatically included as the only district in the "20,000 and over ADM Category", and no combination of districts in the "5,000 - 9,999 ADM Category" closely matched total category characteristics. Therefore, Carlsbad alone was selected as most representative.

Table 1

NUMBER AND ADM OF NEW MEXICO SCHOOL DISTRICTS BY SIZE CATEGORY

ADM Category	Number of Districts in Category	Total ADM in Category
Under 200	8	1,233
200 - 299	12	2,794
300 - 499	10	4,024
500 - 999	16	11,633
1,000 - 2,499	15	21,949
2,500 - 4,999	15	51,455
5,000 - 9,999	7	50,036
10,000 - 19,999	4	49,832
20,000 - and over	1	85,662
TOTALS	88	278,618

Size and Selection of the Sample Population

After the sixteen participating school districts were identified, it was necessary to determine a manageable, yet statistically acceptable, sample size. In view of time, money and personnel limitations and in light of the high degree of representativeness anticipated as a result of the stratification process, a sample size equal to one fourth of one per cent (0.25 per cent) of the total public school ADM was accepted. The sample then would include 697 children. An additional number of children equal to approximately eleven per cent of the sample size was added to compensate for absenteeism and the like, increasing the total number of children to be involved to 774.

The number of children to be drawn from each of the participating districts was calculated by multiplying the total ADM of all districts in each category by .0025 to ascertain the number to be included from that category and then prorating that number across the representative districts according to the ratio of their ADMs. The number of children specified from each district was then increased by eleven per cent.

When the number of children to be involved from each district was established, a computer-generated set of random numbers was obtained for each district to total 774 numbers. The random numbers were matched with names on the ADM rosters in each district, and the corresponding children were selected.

Table 2 shows the size and estimated ethnic composition of the sample by participating districts in comparison to the total population characteristics.

Evaluation Procedures

The most probable form of bias in the evaluation of the children in the sample was the potential

Table 2

COMPARISON OF SIZE AND ETHNIC CHARACTERISTICS OF SAMPLE WITH TOTAL POPULATION

ADM Category	Number of District	Total Category ADM	Median Per Cent Ethnic Distribution			Districts in Sample	Sample Size	Ethnic Distribution of Sample		
			Mexican American	Indian	Other			Mexican American	Indian	Other
0- 199	8	1,233	26 %	0 %*	74 %	House Quemado	2 3	1	0	2 2
200- 299	12	2,794	46 %	0 %*	53 %	Roy Animas	4 5	3 2	1	1 3
300- 499	10	4,024	41 %	0 %*	58 %	Carrizozo Texico	6 6	3 2	0	3 4
500- 999	16	11,633	50 %	0 %*	32 %	Estancia Jemez Mountain	15 17	8 12	2	7 3
1000-2499	15	21,949	49 %	0 %*	34 %	Chama Bloomfield	20 41	15 9	1 13	4 19
2500- 4999	15	51,455	45 %	0 %*	34 %	Taos Artesia	68 75	55 30	3	10 45
5000-9999	7	50,036	22 %	2 %	66 %	Carlsbad	138	50	0	88
10,000-19,999	4	49,832	39 %	3 %	44 %	Roswell Gallup	83 55	25 8	8 33	50 14
20,000 and over	1	85,662	38 %	2 %	58 %	Albuquerque	236	89	5	142
Total	88	278,618	40.7%	7.7%	51.6%	Total Sample	774	312 40.3%	65 8.3%	397 51.2%

*Fewer than half the districts in the category have Indian populations; therefore, the median is 0

variability among the evaluators involved. It was critically important to develop and employ a set of standard screening and evaluation procedures which were realistic in terms of various constraints but which were thorough enough to yield sufficient information for valid and reliable classification of each child in the sample as normal or exceptional with specificity in regard to one or several of the following types of exceptionality: Blind and Visually Handicapped, Hearing Handicapped and Deaf, Speech Impaired, Physically Handicapped, Learning Disabled, Mentally Handicapped (Educable Mentally Handicapped and Trainable Mentally Handicapped), Emotionally Handicapped, Multi-Handicapped and Gifted.[18]

A uniform, step-by-step screening and evaluation procedure was designed to be followed with all children. The procedure is outlined in Appendix A. Training and briefing sessions were programmed which would standardize the behavior of the evaluators and the process in the participating districts.

Implementation of the Study

At the onset of the design process on March 1, 1973, the Division of Special Education enlisted the assistance of the federally funded Southwest Regional Resource Center located at New Mexico State University. Staff of the Center participated with the Division staff in the planning and the implementation of the study.

Upon specification of the sample size and characteristics and the design of the procedure outlined in the previous section, the Division on March 14, 1973, tested the design with an executive group of the State Plan for Special Education Advisory Committee. Following sanction by the Advisory Committee, a meeting was held on March 21, 1973, with the superintendents or their delegates of the sixteen school districts scheduled to participate. The study was discussed in detail, and the response from the districts was supportive and their subsequent cooperation excellent.

Some thirty top caliber psycho-educational diagnosticians from eleven New Mexico school districts were loaned to the Division, upon request, for purposes of evaluation. Additional diagnosticians served on loan from other agencies and groups. A consortium of university and related personnel conducted the entire hearing, speech and language screening portions of the study.

On April 4 and 5, 1973, training workshops for the participating school administrators, school and public health nurses, hearing and speech clinicians and psycho-educational diagnosticians were conducted by Division staff. The workshops were aimed at full understanding of the study and uniformity in its conduct throughout the state.

Division staff made lead trips to participating districts on April 6 and April 9 - 13, 1973, to finalize arrangements and expedite the screening and evaluation phases.

Actual field testing was begun on April 12, 1973, and was completed on May 15, 1973.

Treatment of Data

In order to eliminate to the greatest extent possible the likelihood of bias and error in the final classification of children, all data on each child was punched on computer cards for final analysis. A set of objective criterion measures was developed for each category of exceptionality and programmed into the computer. The identification code for each child meeting the criteria was printed out in each category. The final classification of children, then, was completely automated.

The classification criteria were developed in correspondence to the definitions in the *New Mexico State Standards for Special Education, Revised April, 1973*. Definitions and criteria are found in Appendix B.

RESULTS OF THE STUDY

General Population Characteristics

The data on the sample population were first analyzed with regard to general characteristics such as size, sex, age, grade, language, intelligence and achievement and, when possible, were compared with total population data related to those same characteristics. Those results were as follows:

Size: A total of 718 children was fully evaluated, a number equal to 0.2577 per cent of the total population. The sample size slightly exceeded the required 0.25 per cent.

Sex: The sample group included 358 males, 361 females and one child whose sex was not indicated.

Age: The children in the sample ranged from six through twenty years of age. Table 3 presents the age frequency distribution of the sample.

Table 3

SAMPLE DISTRIBUTION BY AGE LEVEL

Age	Frequency	Age	Frequency
6.0 to 6.11	30	14.0 to 14.11	58
7.0 to 7.11	62	15.0 to 15.11	44
8.0 to 8.11	66	16.0 to 16.11	66
9.0 to 9.11	64	17.0 to 17.11	49
10.0 to 10.11	54	18.0 to 18.11	17
11.0 to 11.11	63	19.0 to 19.11	3
12.0 to 12.11	68	20.0 to 20.11	1
13.0 to 13.11	83		

Grade: The grade placements of the children in the sample ranged from first through twelfth grades. Table 4 compares the percentage of sample children in each grade with the actual percentage of children in each grade in the total population.

Table 4

COMPARISON PERCENTAGE GRADE LEVEL DISTRIBUTIONS OF THE SAMPLE AND TOTAL POPULATION

Grade	% of Sample	% of Population
1	7.7	7.8
2	10.8	7.7
3	8.5	8.3
4	8.1	8.7
5	8.1	8.7
6	10.1	8.9
7	8.8	8.9
8	9.1	8.8
9	8.8	8.5
10	8.2	8.5
11	7.4	7.4
12	4.6	6.6
Sp. Ed.	1.7	1.8

There was no statistically significant difference between the sample and the population distributions by grade level.

Language: Parents of 642 of the 718 children responded to a questionnaire investigating the language(s) spoken in the home. Ninety-five per cent indicated they spoke English in the home. Thirty-seven per cent indicated they spoke Spanish in the home. Two and one-half per cent indicated they spoke Navajo in the home. One and four-tenths per cent indicated they spoke some other language (e.g., Zuni) in the home. Of the total, 60 per cent indicated they spoke only English; 35 per cent indicated that they spoke English and another language, and 5 per cent indicated that they spoke no English.

While the language datum obtained was not directly comparable to existing information on ethnic origin of the statewide population, it was generally consistent with the pattern of ethnic composition reported and bore strong similarity to previous projections related to the need for bilingual education in the public schools.

Intelligence: The mean I.Q. of the sample population on the Wechsler I.Q. Scale was 100.07, with a mean Verbal I.Q. of 97.9 and a mean Performance I.Q. of 102.77. Table 5 shows a comparison of the distribution by I.Q. range of the sample population and the national norm group used in standardizing the Wechsler Scale.

Table 5

COMPARISON PERCENTAGE DISTRIBUTIONS OF THE SAMPLE AND THE NATIONAL NORM GROUP ACROSS INTELLIGENCE LEVELS

Classification	I.Q.	N.M. Sample	Norm Group
Very Superior	130 & above	2.5%	2.2%
Superior	120-129	8.1	6.7
Bright Normal	110-119	17.0	16.1
Average	90-109	50.4	50.0
Dull Normal	80- 89	15.2	16.1
Borderline	70- 79	3.8	6.7
Mental Defective	69 & below	3.1	2.2

The mean I.Q. of the sample was almost identical to that of the norm group (i.e., 100.00), and there was relatively close agreement between the two groups in the percentage distributions at each range. The exception was in the "Borderline" range where the percentage of children in the norm group noticeably exceeded that in the sample group.

Achievement: The mean levels of academic achievement in reading and arithmetic on the Wide Range Achievement Test of the children in the sample were calculated by grade level and are shown in Table 6.

Table 6

MEAN SAMPLE READING AND ARITHMETIC GRADE EQUIVALENTS BY GRADE LEVEL

Actual Grade Placement	Mean Grade Equivalent Reading	Arithmetic
1.8	2.1	2.0
2.8	3.0	2.6
3.8	4.3	3.7
4.8	5.0	4.1
5.8	5.4	4.9
6.8	7.1	5.8
7.8	7.6	6.1
8.8	8.5	6.7
9.8	8.6	6.9
10.8	9.7	7.1
11.8	9.7	7.4
12.8	11.0	8.4

The achievement results presented were not exactly comparable to the selected reported results of the Statewide Public School Group Testing Program for two reasons. The tests used with the sample population were not the same tests as those employed in the Statewide Testing Program; thus, the specific skills measured were somewhat different. As well, all testing in the study was done on an individual basis, and tests were administered by experienced diagnosticians. However, the pattern of achievement in relationship to grade level demonstrated by the sample population was similar to the reported by the Statewide Testing Program for selected portions of the total population.

Summary: In view of the direct and indirect evidence available, the sample population appeared well representative of the total population. Representativeness by size and geographic considerations was directly controlled by the stratification procedure. The random selection of children resulted in a sample which was representative across grade levels. The datum regarding language spoken in the homes of the sample children was compatible with statewide ethnic composition statistics. The intelligence level distribution of the sample children was almost identical to that of the national norm group. The achievement pattern demonstrated was similar to that reported by the Statewide Testing Program. On these bases, it was concluded that the exceptionality incidence rates were obtained on a sound sample and could be extrapolated to the general population as valid and reliable indices of the need for special education services.

Categorical Incidence Rates

A 29.03 per cent rate of exceptionality was found in the sample. Generalizing from the sample to the total population, it is projected that there would be 80,854 conditions of exceptionality found among the public school children in New Mexico. Table 7 shows the incidence rates by category and the corresponding numbers of such conditions in the total population.

Table 7

PROJECTED INCIDENCE OF EXCEPTIONALITY BY CATEGORY IN THE NEW MEXICO PUBLIC SCHOOL POPULATION

Conditions of Exceptionality	Rate	Number
Vision Impairment	.28%	766
Hearing Impairment*	3.91%	10,865
Speech Impairment	7.80%	21,731
Physical Handicap	1.53%	4,269
Learning Disability	7.38%	20,567
Mental Handicap**	3.48%	9,701
Giftedness	2.51%	6,985
Emotional Handicap***	2.00%	5,572
Multiple Handicap	.14%	388
Total Conditions of Exceptionality	29.03%	80,854

*Includes 2.65 per cent mild, .42 per cent moderate, .84 per cent severe
**Includes 2.92 per cent educable, 0.58 per cent trainable
***Estimated

The numbers projected in the total population, as shown in Table 7, are numbers of exceptionalities. If children who had two or more exceptionalities are counted only once, the total number of exceptional children in the public school population would be 70,377 children or 25.26 per cent of the total population.

The incidence data, reported as they were in Table 7 in the traditional psycho-medical categories of exceptionality, were useful in defining the number and kinds of children to whom the special education system may be responsible for the provision of services but of limited value in making management and program organization decisions. Not all exceptional children necessarily require special education programs, and the special needs of those children who do require such programs range from minimal to profound. In order to use the data to project the number and kinds of programs required, it was necessary to review the information in an additional context, that is in light of its educational implications.

Educational Implications

A series of public school special education program options were defined at four levels of intervention, and criteria were established for placement in each. The description and the criteria for each level are included in Appendix C. The data were re-analyzed on the basis of these criteria, and program placements were projected accordingly. Of the 70,377 exceptional children in the public school population, it was estimated that 12,808 children or 4.60 per cent of the total population could function adequately in the regular classroom with no special program support. Of the remaining 57,569 children who need special services, 13,194 or 4.73 per cent of the total population would require only the services of a speech therapist (21,731 children needed speech

therapy, but 8,785 children were included in other categories). Forty four thousand, three hundred seventy-five (44,375) children or 15.93 per cent of the total population would require some form of special education program placement.

It was estimated that 32,785 children or 11.77 per cent of the total population could remain in the regular classroom if special education support were available to the children and to their regular classroom teachers (Programs A and B). Seven thousand, twenty-seven (7,027) children or 2.63 per cent of the total population would require placement in a structured special class but could be integrated into the regular program on some basis (Program C). Four thousand, two hundred and eighteen (4,218) children or 1.51 per cent of the total population would require highly structured special class placement (Program D).

Table 8 shows the categorical distribution of children by recommended program type.

Approximately 9,500 children now receive some kind of public school special education services. More than 48,000 children who need either special education program support and/or speech therapy, then, are not now being served.

Table 8

EXCEPTIONAL POPULATION BY CATEGORICAL DISTRIBUTION AND BY PROGRAM TYPE

Program Type	Gifted[1]	E.H.[2]	L.D.	H.H. Deaf[3]	P.H.[4]	MT.H.	M.R.[5]	V.I. Blind	Speech Impaired[6]	Totals
A B	3,492	4,458	17,075	1,552	1,552		3,880	776	N/A	32,785
C	N/A		3,492				3,880		N/A	7,372
D	N/A	1,114		1,164		388	1,552		N/A	4,218
Totals	3,492	5,572	20,567	2,716	1,552	388	9,312	776		Total 44,375

[1]Total number less 3,493 children who can function in regular classroom
[2]Estimated
[3]Total number less 1,164 children programmed by another classification and 6,985 children who can function in regular classroom.
[4]Total number less 776 children programmed by another classification and 1,941 children who can function in regular classroom.
[5]Total number less 389 children who can function in regular classroom.
[6]21,731 children need speech therapy; 13,194 are only speech handicapped; 8,537 are shown above in other categories.

IDENTIFICATIONS OF TABLE 8 HEADINGS

E.H. — Emotionally Handicapped
L.D. — Learning Disabled
H.H. Deaf — Hard of Hearing/Deaf
P.H. — Physically Handicapped
MT.H. — Multi Handicapped
M.R. — Combination of Trainable Mentally Handicapped and Educable Mentally Handicapped
V.I. Blind — Visually Impaired & Blind

FINDINGS OF AN
INCIDENCE STUDY
SPECIAL EDUCATION SERVICES
STATE OF NEW MEXICO 1973

DIAGNOSTIC & EVALUATIVE FINDINGS

More than 20 per cent of New Mexico's public school children need special education services; fewer than 4 per cent receive these services.

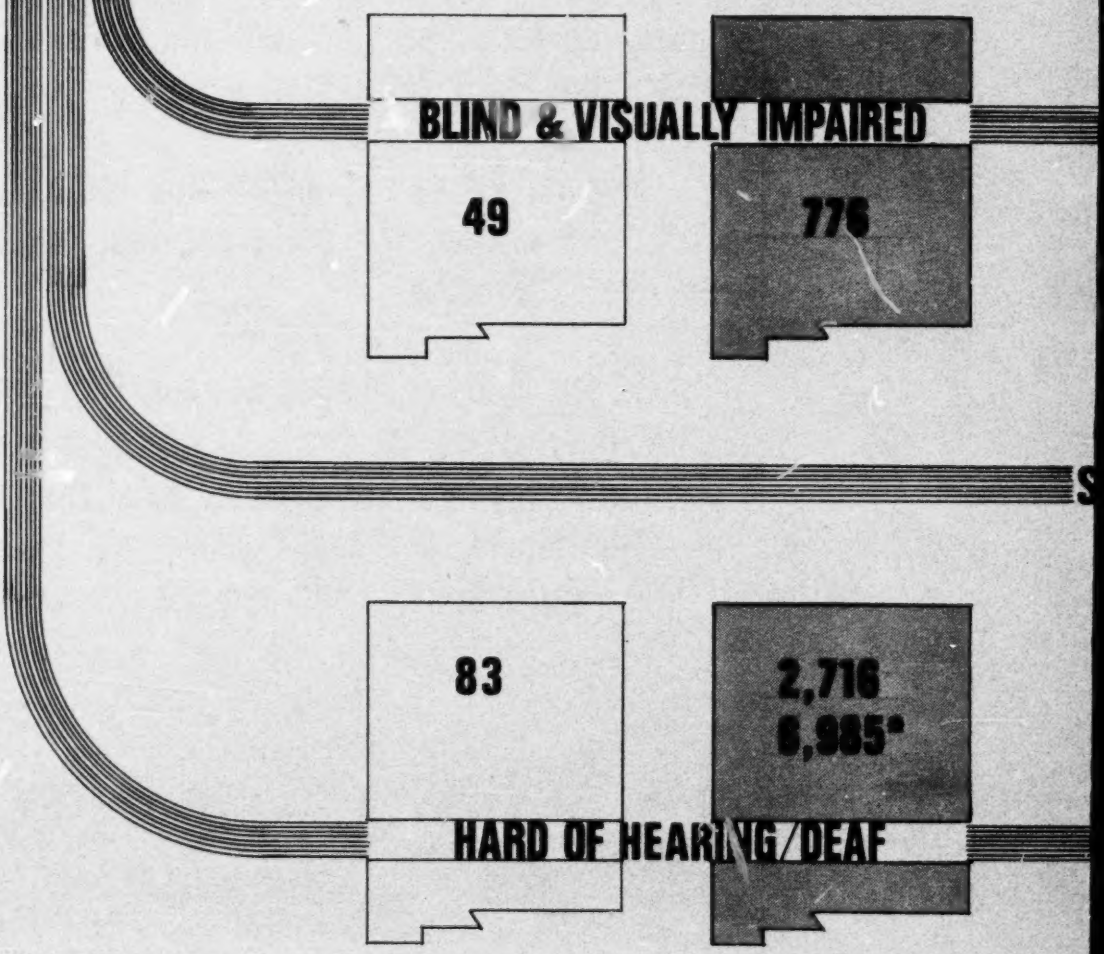
More than 48,000 students who could benefit from special education services will not receive these services during the 1973-74 school year.

Special Education difficulties increase with age of child. The earlier the child receives special education services, the better.

In the support of special education programs, major shortages exist in the availability of diagnosticians, trained teachers and aides, specialized materials, suitable media, developed programs, usable equipment and properly designed and operable environments.

NEW MEX

APPROXIMATE



*OTHERS CAN FUNCTION IN CLASS W/O SPECIAL ED. SER

[redacted] THE NEED FOR

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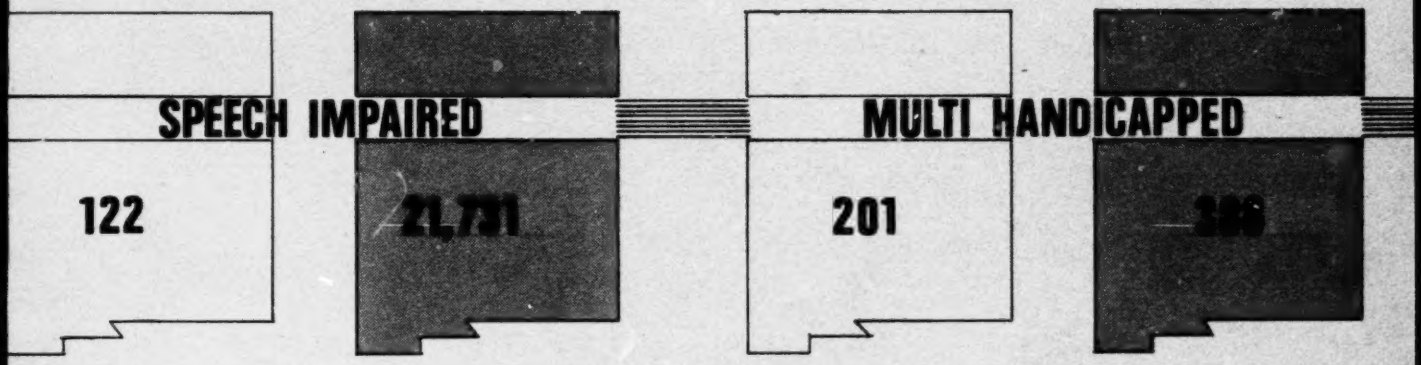

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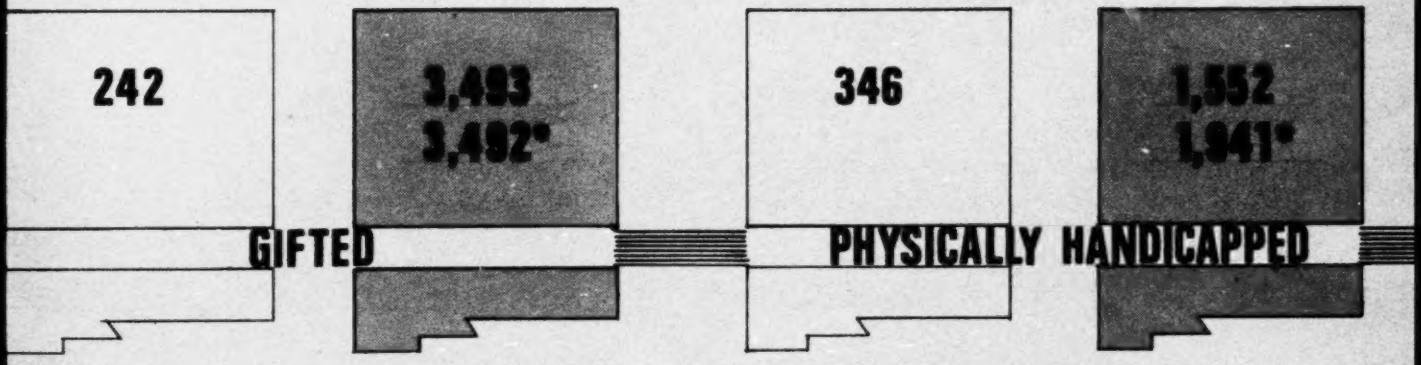
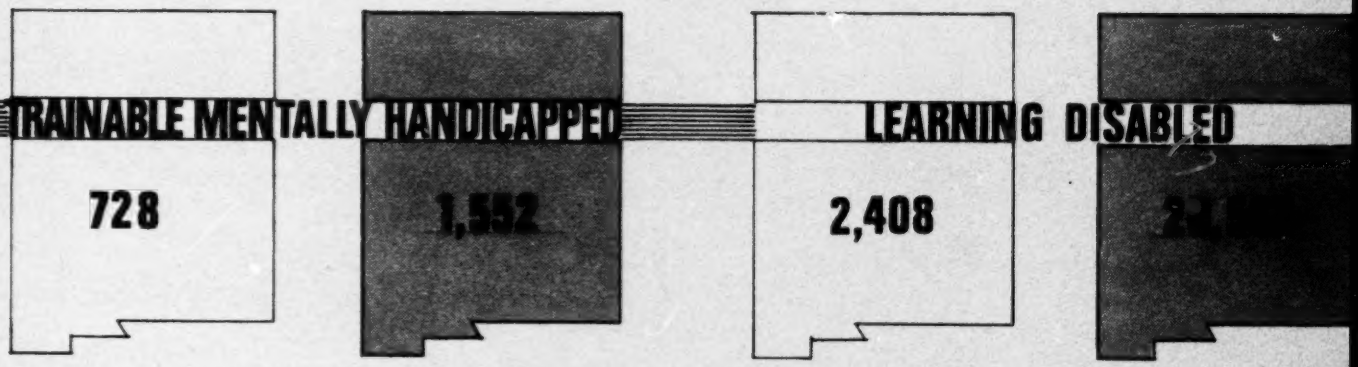


VICES

SPECIAL EDUCATION

IN NEW MEXICO NEED SPECIAL EDUCATION



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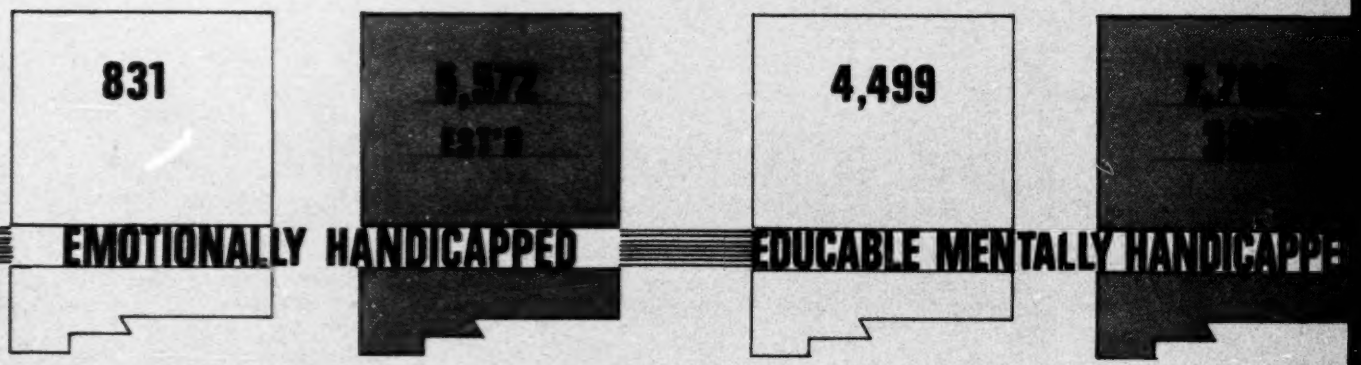


SERVICES IS CRITICAL

BASED ON THE FINDINGS OF THIS STUDY:

70,377 PUBLIC SCHOOL CHILDREN WOULD BE EXCEPTIONAL.

80,854 EXPECTED TOTAL AMOUNT OF EXCEPTIONALITIES.*

57,569 CHILDREN WOULD NEED SPECIAL EDUCATION.

9,503 CHILDREN ARE RECEIVING SPECIAL EDUCATION.

48,066 CHILDREN NEED BUT ARE NOT RECEIVING SPEC. ED.

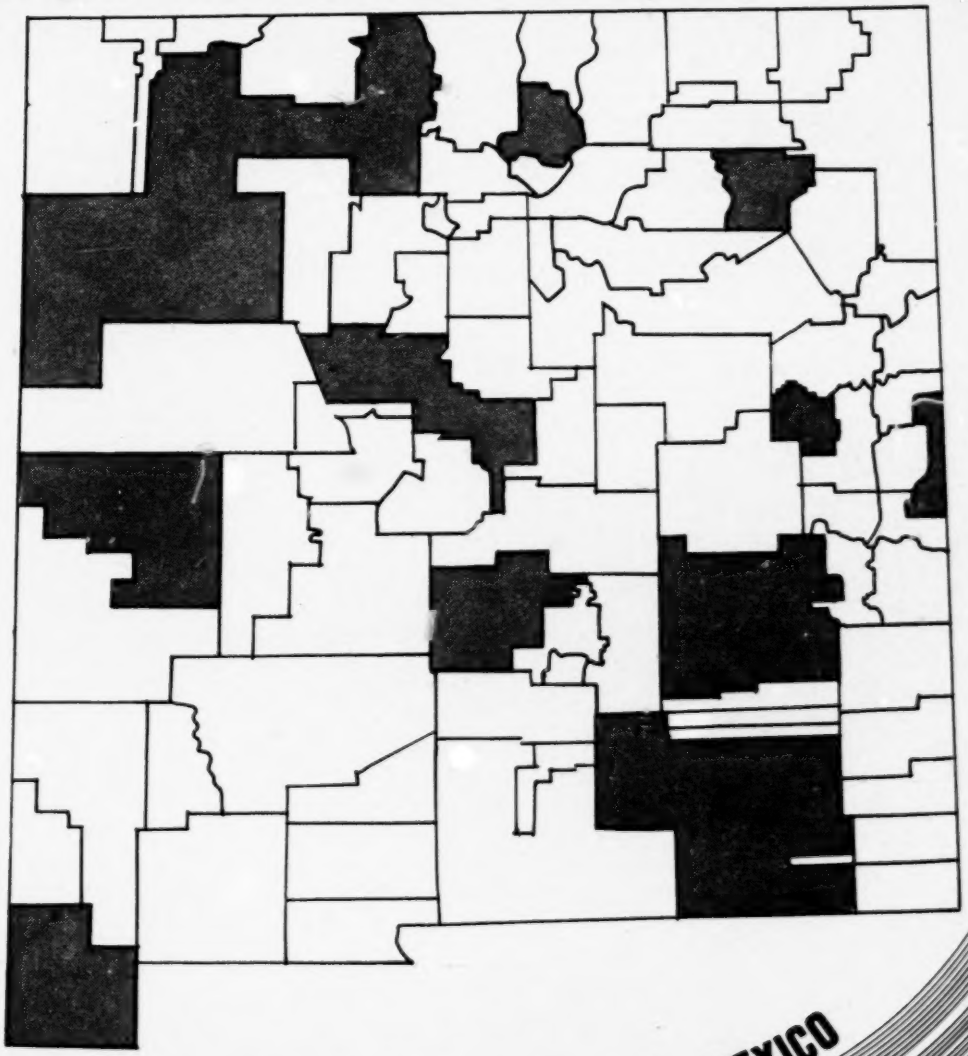
*SOME HAVE MORE THAN ONE EXCEPTIONALITY

FINDINGS INDICATE A NEED FOR:

INCREASED FINANCING FOR THESE COMPONENTS OVER A FIVE-YEAR PERIOD, 1974-79.

1. **IDENTIFICATION AND DIAGNOSIS**
   - Classifying
   - Determining Needs/Defining Behavioral Objectives
   - Choosing Programs
   - Developing Prescriptions
2. **PROGRAM DEVELOPMENT**
   - Forecasting
   - Identifying Program Objectives
   - Selecting Delivery Mechanisms
   - Evaluating Outcomes
3. **TEACHER TRAINING AND EDUCATION**
   - Resident University Courses
   - Summer Programs
   - Continuing Education
   - Workshops, Conferences
4. **MEDIA, MATERIALS, EQUIPMENT**
   - Designing
   - Selecting
   - Adapting
   - Demonstrating
   - Disseminating
5. **ENVIRONMENTAL ADAPTATION**
   - Reallocating Space
   - Eliminating Architectural Barriers
   - Designing Indoor-Outdoor Space Utilization
6. **MONITORING AND EVALUATION**
   - Reporting
   - Auditing
   - Reconciling Discrepancies
   - Follow-up System

WHERE THE CHILDREN CAME FROM



SCHOOL DISTRICT MAP OF NEW MEXICO

SUMMARY AND CONCLUSIONS

Based on projections from a representative random sample of public school children in New Mexico, 57,569 exceptional children require special education program placement and/or speech therapy. During the 1973-74 school year, approximately 9,500 children are receiving some form of special education. More than 48,000 children who need services are not now receiving them. State mandatory special education legislation dictates an urgent need to expand services to more than six times the current level in the next few years. If high quality is to be maintained during a period of rapid expansion, issues of program capability and management and support must be carefully examined. Three critical factors underpin the success of local public school program growth. They are as follows: the identification and diagnosis of children, the availability and competency of manpower and the system of accountability and quality control that is developed.

The special education process is essentially a process of managing learning by objectives: forecasting, identifying objectives, organizing strategies, selecting delivery mechanisms and evaluating outcomes. The process presumes appropriate diagnosis and prescription and highly skilled selection of activities, methods and materials, and lends itself well to check-pointing measures of success. However, ensuring and maintaining high quality during expansion of special education services in New Mexico demands immediate and intensive, concerted efforts in the areas of identification and diagnosis, teacher education and training, and the development of a system of monitoring and evaluation. A pooling of federal, state and local resources, both human and financial, is imperative.

Part II of a *State Plan for Special Education* addresses itself to the development of a regional network of Special Education Services Centers and to a realistic time frame for the rational and orderly phase in and maintenance of quality programs for all exceptional children who need them.

REFERENCES

1. Article II, Sections 77-1-3 through 77-11-3.3, New Mexico Statutes Annotated 1953, As Amended

2. *A Plan for the Delivery of Special Education Services in New Mexico, Part I, "Identification of Problems and Recommended Solutions,"* New Mexico State Department of Education, Division of Special Education, Santa Fe, New Mexico, January, 1973.

3. *Statewide Survey for the Identification of Exceptional Children*, New Mexico State Department of Education, Division of Special Education, Santa Fe, New Mexico, November, 1972.

4. *A Proposal to the New Mexico Health and Social Services Department for Regional Diagnostic Teams via Title IV-A, Social Security Act*, New Mexico State Department of Education, Division of Special Education, Santa Fe, New Mexico, December, 1972.

5. *A Proposal to the 31st New Mexico Legislature for Statewide Diagnostic Teams via Legislative Appropriation*, New Mexico State Department of Education, Division of Special Education, Santa Fe, New Mexico, February, 1973.

6. *Better Education for the Handicapped, Bureau of Education for the Handicapped Annual Report*, FY 1968 - FY 1969, Washington, U.S. Government Printing Office, 1969.

7. *Services for Handicapped Youth: A Program Overview*, Rand Review, Santa Monica, California, Rand Corporation, 1973.

8. Martens, Elise H., *Needs of Exceptional Children*, USOE Leaflet No. 74, Washington, U.S. Government Printing Office, 1944.

9. Mackie, Romaine P. and Dunn, L.M. *College and University Programs for the Teachers of Exceptional Children*, USOE Bulletin No. 13, Washington, U.S. Government Printing Office, 1954.

10. *Final Report: Project Identification*, State Department of Education, Salt Lake City, Utah, 1972.

11. Telephone Interview, State Department of Education, Austin, Texas, 1973.

12. *Special Education Annual Report, 1968-69*, State Department of Public Instruction, Bismarck, North Dakota, 1969.

13. *Report on Study of Learning Disabilities*, A report to the 49th Colorado General Assembly, Colorado Department of Education, Denver, Colorado, January, 1973.

14. Conversation with Lloyd Lamb and David Draper, Department of Communicative Disorders, University of New Mexico, Albuquerque, New Mexico, 1973.

15. Conversation with Robert Hall, Chief, Division of Student Services, Bureau of Indian Affairs, Albuquerque, New Mexico, 1973.

16. *New Mexico State Standards for Special Education, Revised April, 1973*, New Mexico State Department of Education, Division of Special Education, Santa Fe, New Mexico, 1973.

APPENDICES

Appendix A

STANDARD SCREENING AND EVALUATION PROCEDURE NEW MEXICO EDUCATIONAL NEEDS ASSESSMENT 1973

Parental Consent: Each sample district would obtain parental consent for all children's participation, prior to evaluation. If consent was denied, an alternate would be selected using the next consecutive name on the ADM list that represented a different family. The manner in which consent was obtained (mailing, telephone contact, personal visitation, etc.) was left to the district's discretion, although personalization to the highest degree possible was advised. No child would be included without parental consent.

Parent Checklist: Each sample district would obtain information from participants' parents on a prepared checklist of items significant as indicators of various exceptionalities, prior to evaluation.

Teacher Inventory: Each sample district would obtain information from participants' teacher(s) on a prepared inventory of items significant as indicators of various exceptionalities, prior to evaluation.

School Record Summary: Each sample district would record on a prepared form, participants' previous intelligence, achievement and other test data, history of behavior, previous referrals, etc., prior to evaluation.

Health History and Child Observation: Each sample district's school nurse (or county nurse serving that district) would summarize on a prepared observation inventory the medical and health data prior to evaluation.

Vision Screening: Each sample district's school nurse (or assigned public health nurse) would vision screen participants, using the Snellen E Chart, and record results on a prepared form, prior to evaluation.

Hearing, Speech, and Language Screening: A team from outside each sample district would administer the following to all participants:

- Audiometric Testing with "pass" or "fail" results; all "fails" would be retested to establish hearing threshold and degree of severity of loss.
- Fifty word imitation Templin-Darley, with scores recorded and errors noted.
- Four sentence imitation (to assess voice quality, intonation, and fluency) with abnormalities noted.
- Four picture sequence stimulus story and repetition (to assess vocabulary, usage, morphological structure, and grammar) with results noted.

If, at this point, vision, hearing or speech and language deviations represented extreme problems, child might be scheduled for special individual diagnosis.

Psycho-educational Evaluation: A diagnostician from outside each sample district would administer the following to all participants:

- The full Wechsler Intelligence Scale for Children (ages 5-15) or the Wechsler Adult Intelligence Scale (ages 16+). The Binet, the Raven, the Leiter, the Draw-a-Person, etc., could be used for confirmation of questionable results, especially when cultural or linguistic differences were significant.
- The Reading and Arithmetic sections of the Wide Range Achievement Test.

Initial Review and Classification: At this point in the process, an initial review and classification would be conducted by the diagnostician. If a "clean" classification was possible, the process was completed.

Follow-Up Evaluation: If exceptionality was indicated but classification was "questionable," the following would be administered:

- Bender - Gestalt.
- Selected Subtests of the Illinois Test of Psycholinguistic Ability (or full test).
- Other tests as indicated.

Final Review and Classification: At this point, a final review and classification would be conducted by the diagnostician.

Committee Review and Check-Off: At the end of the study, all data would be reviewed for completeness, accuracy and concurrence with the final classification by an evaluation committee established for this purpose.

In addition to the standard procedure outlined above, certain guidelines were established regarding the credibility and confidentiality of the information. Those guidelines were as follows:

- No diagnostician was to be assigned to his own school district.
- Bilingual, bicultural diagnosticians were to be assigned to fulfill individual child needs.
- All screening and evaluation would be performed by outside resources assigned by the Division.
- Information was regarded as highly confidential and even casual discussions between diagnosticians and school personnel were discouraged.
- Feedback would be given districts only upon the Division's receipt of a written request for such from the district, including parent permission for feedback to be used by the district.

Appendix B

CATEGORICAL DEFINITIONS AND CLASSIFICATION CRITERIA NEW MEXICO EDUCATIONAL NEEDS ASSESSMENT 1973

Blind and Visually Impaired*

Definition: A *blind* child is a child with visual acuity of 20/200 or less in the better eye with the best possible correction, or a restriction in the field of vision to an angle subtending an arc of 20 degrees or less.

Criterion: Recorded visual acuity on Snellen E of less than 20/200 after correction.

Definition: A *partially seeing* or visually handicapped child is a child with visual acuity between 20/200 and 20/70 in the better eye with the best possible correction.

Criterion: Recorded visual acuity on Snellen E of 20/70 to 20/200 after correction.

Hearing Handicapped and Deaf:

Definition: Hearing loss is significant at three levels of severity. A mildly hearing impaired child is a child with a hearing loss from 20 to 40 decibels in the better ear. A hard of hearing or moderately hearing impaired child is a child with a hearing loss from 40 to 60 decibels in the better ear. A *deaf* or *severely hearing impaired* child is a child with a hearing loss of greater than 60 decibels in both ears.

Criteria: Mild — a loss of 20-39 decibels in the better ear in at least one of the following frequencies: 500, 1000, or 2000 Hz.

Moderate — a loss of 40-59 decibels in the better ear in at least one of the following frequencies: 500, 1000, 2000, or 6000 Hz.

Severe — a loss of 60 decibels or more in both ears in at least one of the following frequencies: 500, 1000, 2000, or 6000 Hz.

Speech Impaired

Definition: A speech impaired child is a child with any deviation in speech or language which is outside the range of acceptable variation in a given environment (in this usage, *language* refers to impaired language processes indicating a pathological deficit and is not to be confused with problems of bilingualism).

Criterion: A "yes" response from the speech pathologist which indicated a significant problem in articulation, fluency or voice quality, etc.

Physically Handicapped

Definition: A physically handicapped child is a child who is so handicapped in the use of his body through congenital or acquired defects, as to be unable to function with normal children of the same age or who has chronic illness which prevents his attendance in a regular class and requires special services.

*Note: Uncorrected vision handicaps were not included since there was no way of determining correctibility.

Criterion: A "yes" response from the examining nurse which indicated the presence of a crippling condition or a chronic illness.

Learning Disability

Definition: A learning disabled child is a child who exhibits one or more deficits in the essential learning process which may be characterized by various combinations of deficits in perception, conceptualization, language, memory and control and attention, and impulse or motor function. These deficits may be demonstrated verbally or non verbally. A discrepancy between expected and actual academic achievement is observable.

Criteria: A Full Scale Wechsler I.Q. of 76 or above.

Achievement in reading or arithmetic on the Wide Range Achievement Test which was 75 per cent or less of that expected on the basis of grade placement.

Significant deviation of one or more clusters of Wechsler subtests (six clusters of subtests were formed, and if the mean of one or more clusters was 2.0 or more points below the mean of all subtest scores, this criterion was met). If the native language was one other than English, the cluster(s) deficit must be in one or more clusters which did not reflect English language ability. The purpose of this criterion was to eliminate misclassification of children whose school difficulty stems primarily from an inadequate English language background.

Educable Mentally Handicapped

Definition: An educable mentally handicapped child is a child whose intellectual development, mental capacity, adaptive behavior and academic achievement is so markedly below his peer group in all essential learing processes that education in the public schools requires provision of special services.

Criteria: Normal or only mildly impaired hearing.

Full Scale Wechsler I.Q. of 50 to 75. Performance I.Q. below 85. No more than a 19 point difference between the Verbal I.Q. and the Performance I.Q. The purpose of the latter criterion was to eliminate incorrect classification of children whose inadequate English language background depressed overall I.Q. score.

Trainable Mentally Handicapped

Definition: A trainable mentally handicapped child is a child whose intellectual development, mental capacity, adaptive behavior and academic achievement is moderately to severely deficient, and who may be expected to benefit from training in a group setting designed to meet his special needs.

Criteria: Normal or only mildly impaired hearing.

Full Scale Wechsler I.Q. of less than 50.

Emotionally Handicapped

Definition: An emotionally handicapped child is a child with normal or above normal learning potential whose emotional condition is characterized by maladaptive behavior to the extent that he cannot learn at expected levels nor adjust to procedures for his peer group.

Criterion: This category was exempted from the classification procedures since the classification is not possible without observation and evaluation of the child's ability to adapt or adjust to a set of situations and contexts. The amount of time spent with each child, the instruments and techniques used and the types of behavior evaluated in the sample were not adequate to yield this information. The emotionally handicapped incidence reported in this report is estimated.

Multi-Handicapped

Definition: A multi-handicapped child is a child who has a combination of two or more handicaps which produce such serious learning, developmental and/or behavioral problems that successful progress in a program designed to accommodate a single major handicap is limited or prohibited.

Criterion: A "no score" on the specified tests involved in the evaluation procedure.

Gifted

Definition: A gifted child is a child with superior intellectual and emotional adjustment and creative ability.

Criterion: Full Scale Wechsler I.Q. of 130 or more.

Appendix C

RANGE OF SERVICE ALTERNATIVES FOR PUBLIC SCHOOL SPECIAL EDUCATION

Level of Special Learning Needs of Exceptional Child	Criteria	Most Probable Categories of Children	Recommended Program Provision & Description	What Happens to Child
A. Minimal - Child's special learning needs are such that he does not require a basic modification of the regular curriculum but can remain full time in the regular classroom with support and back-up.	Child is achieving at 50 to 75 per cent of the expected level of performance and shows evidence of keeping up with the regular program with support. Child's behavior allows functioning in the regular classroom.	Gifted, Emotionally Handicapped, Learning Disabled, Educable Mentally Handicapped, Speech Handicapped, Blind and Visually Impaired, Deaf and Hearing Impaired, Physically Handicapped	Resource Teacher - Suggested ratio 1/30-35. Special teacher serves a number of teachers with exceptional students and travels from class to class/school to school assisting teachers and children on a part-time basis.	Child is given special help in the regular classroom and is taught primarily by regular classroom teacher who is assisted by the resource teacher.
B. Mild - Child's special learning needs are such that he does not require a basic modification of the regular curriculum but does need additional intensive, remedial assistance outside the classroom.	Same as A.	Same as A.	Resource Room - Suggested ratio 1/18-24. Special teacher is permanently based and works with children on a regular part-time basis.	Child is given special help in the resource room by the resource room teacher who coordinates with the regular classroom teacher. Child is taught primarily by the regular classroom teacher.
C. Moderate - Child's special learning needs are such that content, methods and/or pacing in the regular classroom are inappropriate and must be modified.	Child is achieving at 50 per cent or less of the expected level of performance and shows little likelihood of catching up. Child's behavior allows functioning in medium sized group setting.	Learning Disabled, Educable Mentally Handicapped	Special Education Class - Suggested ratio 1/10-15. Special teacher works with a group (class) of children on a part to full-time basis and integrates children into regular program to greatest extent possible.	Child is taught by special teacher in special classroom and by the regular classroom teacher for integration activities.
D. Severe - Child's special learning needs are such that the regular classroom program is totally inappropriate and unresponsive. An individualized total program is required.	Child is achieving at less than 25 per cent of the expected level of performance or is currently not capable of functioning at all in the regular class. Child's behavior requires minimum class size and a high degree of supervision and individual attention.	Emotionally Handicapped, Deaf, Blind, Trainable Mentally Handicapped, Multi-Handicapped	Special Education Class - Suggested ratio 1/4-8. Special teacher works with small group of children on a highly structured, full-time basis and integrates children into regular program if possible.	Child is taught by special teacher in special classroom.

This study would not have been possible without the excellent cooperation and support on the part of administrative, clerical and nursing personnel in the sixteen New Mexico public school districts from which the sample population was selected (Albuquerque, Animas, Artesia, Bloomfield, Carlsbad, Carrizozo, Chama, Estancia, Gallup, House, Jemez Mountain, Quemado, Roswell, Roy, Taos, and Texico).

The Special Education staff of the State Department of education are sincerely grateful for the generous contribution of diagnostic manpower from eleven school districts (Albuquerque, Artesia, Carlsbad, Clovis, Gallup, Hagerman, Las Cruces, Los Alamos, Roswell, and Ruidoso), the Bureau of Indian Affairs, the Navajo Tribe, the Department of Hospitals and Institutions and the Southwest Regional Resource Center, along with the fine consortium of speech, hearing and language screening personnel donated by the University of New Mexico, Department of Communicative Disorders; New Mexico State University, Speech and Hearing Department; Eastern New Mexico University, Speech and Hearing Department; the New Mexico School for the Deaf; and the New Mexico Health and Social Services Department, Crippled Children's Services. The enthusiasm and unflagging efforts of the diagnosticians involved undoubtedly account for the success of the venture and for the efficacy of the results, of such critical importance in planning the expansion of special education services.

Finally, the technical assistance from the staff of the Southwest Regional Resource Center proved invaluable in the design and implementation of the study and in the preparation of this report. Our thanks go to former Southwest Regional Resource Center staff Thomas Chastain, Joseph Jenkins, Michael Boravicka and Charles Miller, who left an impact on the future of special education in New Mexico through their participation in this study.